

## ABSTRACT OF THE DISCLOSURE

Mechanisms for automatically generating code that tests capabilities of a test computing system to simulate a message exchange pattern. The code generation computing system uses a message exchange pattern definition to generate the simulation code. For each state in which the message exchange pattern definition allows valid messages to be transmitted, code is generated for that state that at least simulates the transmission of a valid transmission message. For each state in which the message exchange pattern definition allows valid messages to be received, code is generated for that state that simulates the receipt of a valid receipt message. If the transmission or receipt of the message causes a state transition to occur, code is generated that causes the appropriate state transition in the message exchange pattern.

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